PREDICTIVE ANALYTICS: THE SCIENCE OF SOOTHSAYING

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Michael Lock
Vice President & Principal Analyst, Analytics and Business Intelligence

Mohamed Haimoud
Research Associate, Service Management & Retail Markets

Report Highlights

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Predictive analytics tops list of investment priorities for senior executives.

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Ninety-three percent of Best-in-Class companies are satisfied with the sophistication of their analytics capabilities.

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Best-in-Class are almost twice as likely to make data-driven decisions.

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Best-in-Class companies enjoy 67% greater year-over-year growth in customer acquisition.

Across industries, the prominence and availability of data has exponentially increased in recent years. But companies need modernized ways to mine this data for strategic advantage. By exploring the role of predictive analytics in this endeavor, this report aims to highlight how the Best-in-Class use tools and processes to turn the challenge of data growth into an opportunity for company growth.

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Today's business climate demands proactivity, not reactivity, and Best-in-Class firms are investing in predictive analytics tools to bring about positive change.

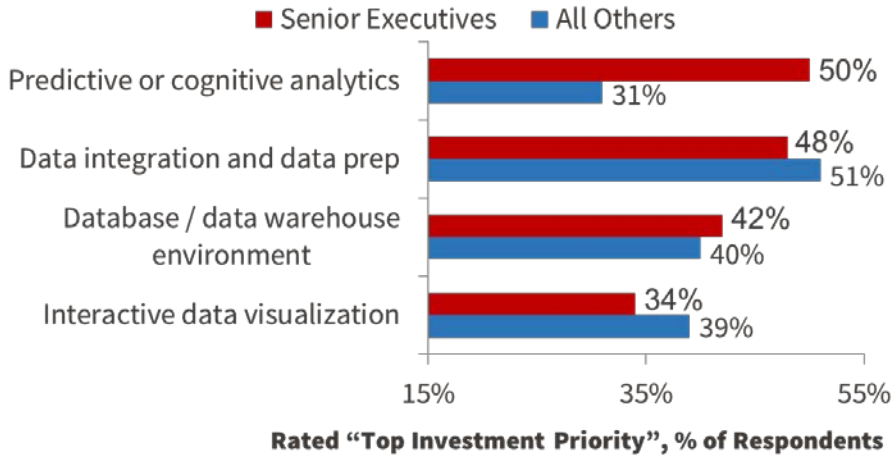
In today's business landscape, data is becoming a challenge for some, and an opportunity to differentiate for others. Beyond storage, sanitation, management and processing, data requires analysis to yield insights that can have far-reaching impact on the growth and development of an enterprise.

While challenges with data historically stemmed from organizations' inability or lack of infrastructure to store, clean, and process it, the focal point of this report is how companies can derive insights from data and appropriately act on them using predictive analytics. Today's business climate demands proactivity, not reactivity, and Best-in-Class firms are investing in predictive analytics tools to bring about positive change.

Predictive Analytics: Better to Know than to Wonder

Aberdeen's 2017 research shows senior executives rate predictive analytics as a top investment priority, as they try to anticipate changes in their business and respond swiftly to opportunities and threats (Figure 1).

Figure 1: Predictive Analytics Tops Executive Wish list



n = 422, Source: Aberdeen Group, July 2017

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Turning insights from data into transformative action requires tools and processes to optimize decisions through predictive analytics.

Predictive analytics reigns over the executive wish list for some obvious reasons, others less so. Fundamentally, it is predicated on the idea that one can infer and act on what *could be* from what *is* or what *was*. This is important because senior executives are typically tasked with manifesting a company's long-term vision.

The future of a business rests in the hands of the executive leadership and the decisions they make. Their approach is generally top-down, and, if successfully carried out, it can have a broad impact on multiple lines of businesses—reducing operating costs, increasing employee productivity, driving customer growth and loyalty, etc. So, turning insights from data into transformative action requires tools and processes to optimize decisions through predictive analytics.

Data-driven Divination

The possibilities with data are nearly limitless, but the goals should be precise and achievable. This undertaking demands an alignment of people, tools, and processes:

- **The ability to take data and derive predictive insight from it rests on the strength of a company's analytics toolbox.** Some equate predictive with advanced analytics, but even at a more basic level, it is the apparatus needed to provide a path for ingesting and modeling large amounts of data for future decisions. Having the right tools is crucial, and Aberdeen's 2017 Analytics research shows that 93% of Best-in-Class companies are satisfied with the sophistication and firepower of their analytics capabilities, compared with 56% of the Industry Average and 1% of Laggards.

- With the appropriate business intelligence and analytics tools in place, predictive analytics can have multiple

applications in business. Companies can use it to foresee customer responses to their marketing efforts, make product recommendations based on clients' purchase history, develop behavior-based ads to increase the propensity of customer engagement, optimize a supply chain to account for changes to the flow of goods in real-time, support the recruitment and retention of their human capital, and so forth. Particularly as it pertains to customers, **having the right data and relevant forward-looking models helps to anticipate customer needs and respond quickly to requests.** To this point, 100% of Best-in-Class companies reported an "improvement" or "significant improvement" in customer response, compared with 77% of the Industry Average and 31% of Laggards.

➔ **The customer-centricity enabled by the use of predictive analytics fuels organic revenue growth.** Predictive is proactive, and with the right analytical systems and capabilities in place, companies are in a position to identify and act on insights to drive growth. Aberdeen's research reveals Best-in-Class companies saw an average 21%-year over-year (YOY)growth in organic revenue, compared with 12% for the Industry Average and 4% for Laggards.

The Aberdeen maturity class framework places companies in one of three categories based on their self-reported performance across key metrics:

- **Best-in-Class**: Top 20% of respondents based on performance
- **Industry Average**: Middle 50% of respondents
- **Laggard**: Bottom 30% of respondents
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Sometimes we refer to a fourth category, **All Others**, which combines Industry Average and Laggard organizations.

Planning for the Future Starts Now: How the Best-in-Class Differ

Top performing companies share a variety of common characteristics that help support execution. As highlighted in Figure 2 (next page), they excel at encouraging data-driven decisions, creating formal roles to support data initiatives, and enabling the sharing of data across the enterprise.

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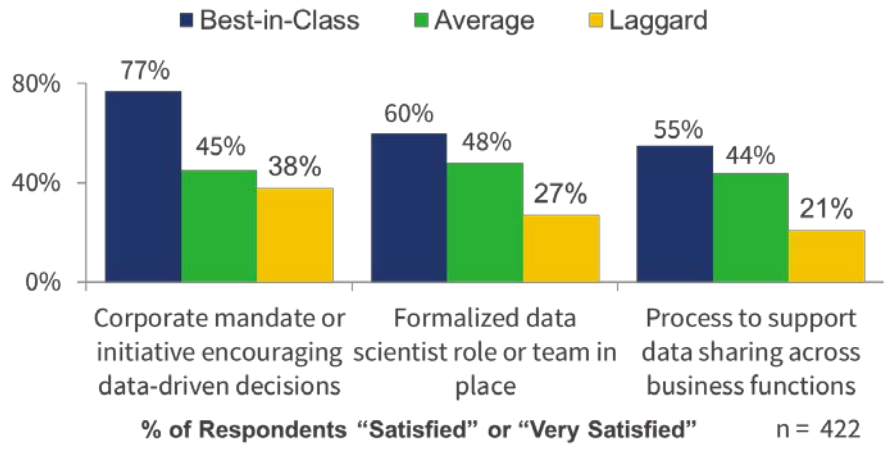
Figure 2: Best-in-Class Democratize Data for Company-wide Utility



Source: Aberdeen Group, July 2017

Excelling with predictive analytics requires more than just technology, but a philosophy, or mindset, that starts from the top.

Excelling with predictive analytics requires more than just technology, but a philosophy, or mindset, that starts from the top. Just as senior executives place predictive analytics at the top of their wish list, Aberdeen's survey results further highlight that 77% of Best-in-Class companies espouse corporate initiatives encouraging data-driven decisions, compared with 42% of All Others. This may reflect a deliberate undertaking by savvy executives (see Figure 1 on page 2) looking to augment their business strategy by incorporating the intelligent use of data in their decision-making process. By embracing the challenge of such an endeavor, companies can create a business environment that is truly conducive to growth.

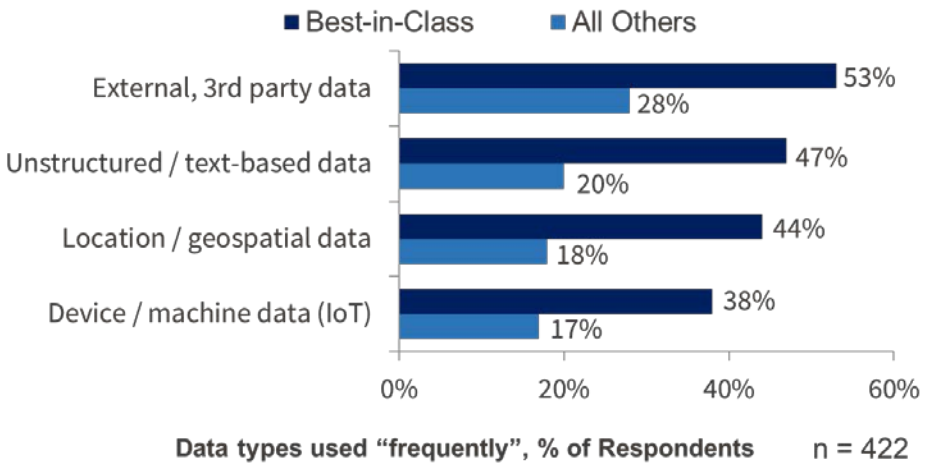
Best-in-class companies put the right processes in place to share and socialize data across business functions, while having the skill sets in place to properly leverage that data. Specifically, Aberdeen's 2017 data suggests that Best-in-Class companies are 60% more likely than All Others to have a formal data scientist or team in place to support the maturation of their data-driven objectives. Additionally, Best-in-Class are 69% more likely than All

Others to have processes in place to support data sharing across different parts of the business. By employing data scientists and enabling the multi-directional flow of data to support critical business functions, companies can establish common objectives between internal organizations, reduce the disparity of healthy performance among different lines of businesses, drive quicker and more appropriate decision-making, and create the infrastructure to proactively tend to their customers.

➔ Read the full report: *Analytics in the Age of IoT: Today's Data-Driven Competitive Edge*

➔ Related Research: *Holistic BI: Capitalizing on End-to-End Analytical Activity*

Figure 3: Best-in-Class Exploit a Variety of Data Sources



Source: Aberdeen Group, July 2017

The quality of forward-looking predictive analyses is highly dependent upon the quality of the underlying model. The quality of the underlying model varies depending on the cleanliness and richness of data from which it is built. The data must be rich in volume and quality to provide the most accurate insight and enable the most valuable action.

As users look to augment and enrich their predictive modeling capabilities, many companies are incorporating data from a variety of sources and in a variety of forms. Best-in-Class organizations remain leaps ahead of All Others when it comes to

Best-in-Class companies are more likely to use a breadth of data on a regular basis to help inform and improve their predictive abilities.

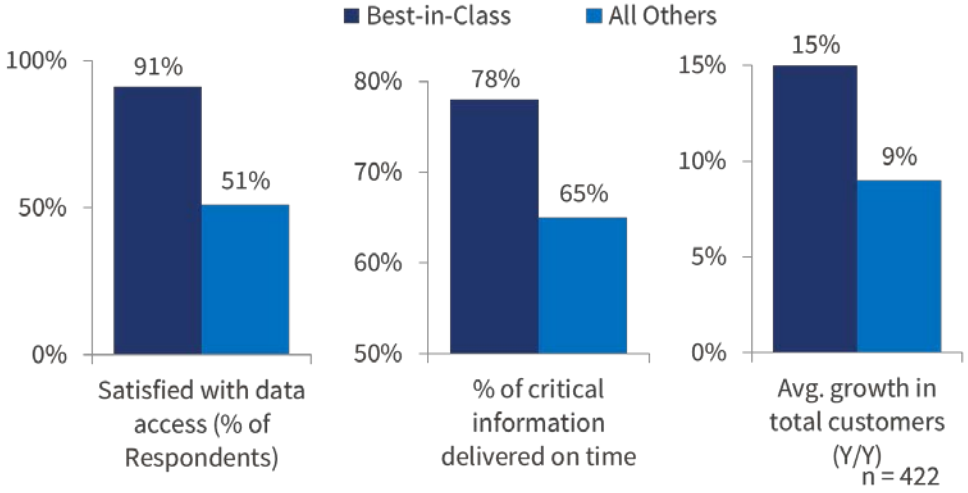
This section is to explain how we determine Best-in-Class, Leaders/Followers, or any other data-cut explanation we want to give. For the purposes of this analysis, the sentiment of value was determined by evaluating the responses received for each of the 13 metrics we evaluated. Responses were graded on a five-point scale, which included:
1 – Least valuable
2 – Somewhat valuable
3 – Neutral
4 – Valuable
5 – Most valuable

the use of different data sources as well as the frequency of their use. They are 89% more likely to use external or 3rd party data, more than twice as likely to incorporate unstructured or text-based data, almost two and a half times as likely to rely on location or geospatial data, and again, more than twice as likely to incorporate machine or Internet of Things (IoT) data in shaping and augmenting their predictive analytics approach. **Best-in-Class companies are more likely to use a breadth of data on a regular basis to help inform and improve their predictive capabilities.**

Predictive Analytics Enable Predictability of Results

Top companies tap a rich foundation of data and facilitate access to that data for more business leaders. By drawing from multiple data sources, assessing and ensuring quality of data, analyzing it to derive insight, and democratizing it to Line of Business Leaders for its utilitarian value, Best-in-Class companies can use predictive analytics tools to achieve an organization's vision and enjoy the host of benefits that come with it, as shown here:

Figure 4: Best-in-Class Use Data to Enhance Performance



Source: Aberdeen Group, July 2017

So, how do Best-in-Class organizations benefit when compared with All Others? As reflected in Figure 4, Best-in-Class companies are 78% more satisfied with data access. Data accessibility serves to reduce decision latency, while predictive analytics bolster the likelihood that resulting decisions have a positive and tangible impact on the business.

The impact of predictive analytics extends to the customer as well. Best-in-Class companies see a 66% greater YOY growth in total customers when compared with All Others. These results show that incorporating a predictive analytics process in the enterprise can help companies ensure that customer expectations are met before their demands are made.

Key Takeaways

Not too long ago, predictive analytics was a novelty in the enterprise. There were challenges stemming from barriers to its adoption, or a lack of congruity among company executives' desires to invest in the tools necessary to support predictive analytics. Today, however, that investment is a necessity. The amount of data that exists in different systems, machines, sensors, etc., can paint a picture of the unseen, and yield powerful insight for how operations within a business can be optimized. Executives pondering their investment in predictive analytics tools should consider the following:

➔ **Senior executives must realize vision through action**

Predictive analytics is a priority for senior executives because their role requires decisions to positively shape the future of their organizations. Setting priorities without a willingness to actualize them will inevitably yield little to

no results. As such, executives must recognize the value of the data they have, and take the appropriate measures to operationalize it for the sake and well-being of the business.

➔ **Data quantity and quality impact results**

Companies that are successful in adopting data-driven decision making also tend to invest heavily in the amount and variety of data that goes into building their models. The ability to operationalize data into predictive insight requires that the data not only be sanitized, and large in volume, but that it comes from different sources so as to paint the most accurate picture. As such, organizations aiming for visibility into the future, must understand all their data sources: Where is it housed? What does it represent? How could it be used? And why could it have an impact?

➔ **Data-driven decisions foster customer-centricity**

A business cannot exist without customers, and businesses must act in a way that shows a commitment to retain them. By enabling predictive analytics capabilities, companies can develop a clearer picture of who their best customers — and prospective best customers — are. Furthermore, they can bolster their offerings based on their understanding of what products sell best and predict future trends based on past inventory data. The opportunity to exceed customer expectations is unlimited.

For more information on this or other research topics, please visit www.aberdeen.com.

Related Research

Answering the Call of Data Diversity with Best-in-Class MDM; June 2017

Modern MDM: The Hub of Enterprise Data Excellence; June 2017

The Data Warehouse Evolved: A Foundation For Analytical Excellence; May 2017

Data Preparation: The New Normal, The Now Necessary; March 2017

Michael Lock, Vice President & Principal Analyst
Business Intelligence & Analytics

Mohamed Haimoud, Research Associate,
Service Management & Retail Markets

About Aberdeen Group

Since 1988, Aberdeen Group has published research that helps businesses worldwide improve their performance. Our analysts derive fact-based, vendor-agnostic insights from a proprietary analytical framework, which identifies Best-in-Class organizations from primary research conducted with industry practitioners. The resulting research content is used by hundreds of thousands of business professionals to drive smarter decision-making and improve business strategy. Aberdeen Group is headquartered in Waltham, MA.